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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/998,738 | 10/31/2001 | Louis Odenwald | 01-533 | 7019 |

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| EXAMINER | |
|---|---|
| NGUYEN, MIKE | |
| **ART UNIT** | **PAPER NUMBER** |
| 2182 | 4 |

DATE MAILED: 03/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/998,738 | ODENWALD, LOUIS | |
| | Examiner | Art Unit | |
| | Mike Nguyen | 2182 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *07 January 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

### *Notices & Remarks*

1. Applicant's amendment 01/07/2004 in response to Examiner's Office Action has been reviewed.

2. Claims 1-21 are pending for the examination.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-8, 10-14, 16-18 and 20-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Sjolander et al. (U.S. Pat. No. 6,587,959 B1).

4. As to claims 10 and 1, Sjolander teaches an apparatus and a system for providing an input/output interface with load balancing functionality between a host and a target (see fig. 3), comprising:

a host including an input/output interface (see fig. 3 element "SERVER CLUSTER"), the

input/output interface including:

a first data transfer route suitable for communicatively coupling the apparatus to a host system (see fig. 3 elements "CLIENT", "SERVER CLUSTER");

a second data transfer route suitable for communicatively coupling the apparatus to a target (see fig. 3 elements "SERVER CLUSTER", "DISK STORAGE" "AB");

a third data transfer route suitable for communicatively coupling the apparatus to a target (see fig. 3 elements "SERVER CLUSTER", "DISK STORAGE" "DE");

a memory suitable for storing electronic data, the memory including a program of instructions (col. 3 lines 50-62); and

a single controller (see col. 3 lines 38-42 and col. 4 line 57 to col. 5 line 8) communicatively coupled to the first data transfer route, the second data transfer route, the third data transfer route and the memory, the single controller suitable for performing the program of instructions, wherein the program of instructions configures the single controller to transfer data between the host and target utilizing a logical identifier included in a logical identifier table associated with the second data transfer and the third data transfer route, the data transfer performed by utilizing the second data transfer route and the third data transfer route in a load balance manner (see col. 3 lines 66-67 and col. 4 lines 1-58).

5. As to claim 2, Sjolander teaches the apparatus and the method, wherein the host does not have dynamic multipathing filter functionality (see col. 3 lines 3-58 wherein the client sends a message to the server and this message is specifically addressed to a hardware device which is shared by the server. After that the server automatically polls all ports to determine what

hardware device are connected and determine which route use to communicate with the hardware device).

6. As to claim 3, Sjolander teaches the apparatus and the method, wherein the host, when confronted with multiple routes to a target, views the multiple routes as multiple targets (col. 5 lines 9-23).

7. As to claim 4, Sjolander teaches the apparatus, wherein a logical identifier is utilized to access the apparatus by the host (see col. 3 lines 44-62).

8. Ad to claim 5, Sjolander teaches the apparatus in claim 4, wherein the logical identifier is included in a logical identifier table (see col. 4 lines 49-57).

9. As to claim 6, Sjolander teaches the apparatus and the method, wherein the logical identifier is associated with a target routing table, the target routing table including a target routing entry indicating a data transfer route between the target and the apparatus (col. 4 lines 22-48).

10. As to claims 13, 7 and 18, Sjolander teaches the system, the apparatus and the method, wherein the route includes at least one of world wide node name and world wide port name (see col. 4 lines 3-8).

11. As to claims 8 and 14, Sjolander teaches the apparatus and the system, wherein the target routing entry includes a physical address of the target (see col. 4 lines 27-32).

12. As to claim 11, Sjolander teaches the system as described in claim 10 wherein the second data transfer route and the third data transfer route are indicated by entries in a target routing table (col. 4 lines 22-48).

13. As to claim 12, Sjolander teaches the system as described in claim 11, wherein the target routing table includes a target routing entry indicating a data transfer route between the input/output interface and the apparatus (see col. 4 lines 22-48).

14. As to claims 16 and 21, Sjolander teaches a method for providing a load-balancing function between a host and a target in a network environment by an input/output interface, comprising:

providing a logical identifier table by an input/output interface including a single controller (see col. 3 lines 38-42 and col. 4 line 57 to col. 5 line 8), the logical identifier table including at least one logical identifier, the logical identifier suitable for referencing at lest one physical address identifier of a target (see col. 4 lines 2-48); and

managing communications between the host and the target by selecting a route by the input/output interface from at least two routes associated with a logical identifier, the at least two routes communicatively coupling the input/output interface to the target so that the host transfer data by balancing data transferred utilizing the second route and the third route of at least two routes (see col. 4 lines 49-67 and col. 5 lines 1-32).

15. As to claim 17, Sjolander teaches the method as described in claim 16, wherein the logical identifier is associated with the physical address identifier included in a target routing table (col. 4 lines 3-8, 22-48)

16. As to claim 20, Sjolander teaches the method as described in claim 19, wherein the single controller is suitable for managing the communications (see col. 3 lines 66-67 and col. 4 lines 1-58).

***Claim Rejections - 35 USC § 103***

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

18. Claims 9, 15 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sjolander in view of Bass (U.S. Pat. No 6,137,797).

As to claims 15, 9 and 19, Sjolander fails to explicitly teach at least one of a loop and fabric. Bass; however, teaches the apparatus is communicatively coupled to the target over at least one of a loop and fabric (see fig. 1 and col. 4 lines 20-25). It would have been obviously a person having ordinary skill in the art to have at least one of a loop and fabric by Bass in order to enable a device on one communicate network, such as LAN, to communicate with another device on another LAN (see col. 1 lines 15-17).

***Response to Arguments***

19. In response to the applicant's arguments that Sjolander fails to disclose the "a single controller". Examiner disagrees, in col. 3 lines 38-42 and col. 4 line 57 to col. 5 line 8 clearly indicates that the server cluster is used to send messages to peripherals but there is only one server either default server or backup server is used to control messages. Therefore, Sjolander discloses the system comprising the "a single controller" used to communicate with the peripherals and perform balancing data transfer over paths coupled to the peripherals.

***Conclusion***

20. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Pat. No. 6,640,281 B2 (Obara et al.)

U.S. Pat. No. 6,341,356 B1 (Johnson et al.)

U.S. Pat. No. 6,327,622 B1 (Jindal et al.)

U.S. Pat. No. 5,848,241 (Misinai et al.)

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mike Nguyen whose telephone number is 703 305-5040. The examiner can normally be reached on 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Gaffin can be reached on 703 308-3301. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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03/16/2004